We claim:

1. A vaccine for immunizing an individual against a virus, wherein the vaccine comprises:

a viral vector comprising a coxsackievirus genome modified to encode an attenuated coxsackievirus, the genome further comprising at least one cloning site for insertion of at least one expressible heterologous nucleic acid, wherein the heterologous nucleic acid encodes at least one antigenic epitope of the virus.

2. The vaccine of claim 1, wherein the virus is adenovirus and the heterologous nucleic acid encodes an Adenovirus 2 hexon loop.

3. The vaccine of claim 1, wherein the virus is human immunodeficiency virus.

4. The vaccine of claim 1, adapted to immunize an individual against a plurality of viruses.

5. The vaccine of claim 4, wherein the plurality of viruses comprise a plurality of coxsackievirus serotypes and the heterologous nucleic acid encodes a BC loop of capsid protein 1D from one or more coxsackievirus serotypes other than the viral vector serotype.

6. The vaccine of claim 1, wherein the viral vector comprises a a coxsackievirus B genome.

7. The vaccine of claim 6, wherein the coxsackievirus genome is a coxsackievirus B3 genome.

8. The vaccine of claim 7, wherein the coxsackievirus genome is modified by altering a transcription regulatory region of the genome.

9. The vaccine of claim 8, wherein the transcription regulatory region comprises a 5' untranslated region of the genome.

10. The vaccine of claim 9, wherein the 5' untranslated region is replaced with a 5' untranslated region of another enterovirus genome selected from the group consisting of poliovirus and echovirus.

11. The vaccine of claim 9, wherein a uracil nucleotide at position 234 of the genome is replaced by a cytosine nucleotide or a guanine nucleotide.

12. The vaccine of claim 9, wherein a guanine nucleotide at position 233 of the genome is replaced by a cytosine nucleotide and an andenine nucleotide at position 236 of the genome is replaced by a uracil nucleotide.

13. The vaccine of claim 1, wherein the cloning site is positioned between a coding sequence for a capsid protein and a coding sequence for viral protease.

14. The vaccine of claim 1, wherein the cloning site is positioned at the start of the genome's open reading frame, and is constructed such that the inserted expressible heterologous DNA comprises a translation start codon and a 3' sequence recognized by a viral protease.

15. A method of immunizing an individual against a virus, which comprises administering to the patient the vaccine of claim 1.

16. A composition for treating an individual for insulin-dependent diabetes mellitus, which comprises:

a viral vector comprising a coxsackievirus genome modified to encode an attenuated coxsackievirus, the genome further comprising at least one cloning site for insertion of at least one expressible heterologous nucleic acid, wherein the heterologous nucleic acid encodes a biologically active immunomodulatory protein that induces a shift from a Th1 to a Th2 immune response in the individual.

17. The composition of claim 16, wherein the heterologous nucleic acid encodes IL-4.

18. The composition of claim 16, wherein the viral vector comprises a a coxsackievirus B genome.

19. The composition of claim 18, wherein the coxsackievirus genome is a coxsackievirus B3 genome.

20. The composition of claim 19, wherein the coxsackievirus genome is modified by altering a transcription regulatory region of the genome.

21. The composition of claim 19, wherein the transcription regulatory region comprises a 5' untranslated region of the genome.

22. The composition of claim 21, wherein the 5'

untranslated region is replaced with a 5' untranslated region of another enterovirus genome selected from the group consisting of poliovirus and echovirus.

21. The composition of claim 19, wherein a uracil nucleotide at position 234 of the genome is replaced by a cytosine nucleotide or a guanine nucleotide.

22. The composition of claim 19, wherein a guanine nucleotide at position 233 of the genome is replaced by a cytosine nucleotide and an andenine nucleotide at position 236 of the genome is replaced by a uracil nucleotide.

23. The composition of claim 16, wherein the cloning site is positioned between a coding sequence for a capsid protein and a coding sequence for viral protease.

24. The composition of claim 16, wherein the cloning site is positioned at the start of the genome's open reading frame, and is constructed such that the inserted expressible heterologous DNA comprises a translation start codon and a 3' sequence recognized by a viral protease.

25. A method of treating, preventing or suppressing onset of insulin-dependent diabetes mellitus in an individual, which comprises administering to the individual the composition of claim 16.

26. A method of suppressing onset of insulin-dependent diabetes mellitus in an individual, which comprises inoculating the individual as a juvenile or infant

with a coxsackievirus.

27. The method of claim 26, wherein the coxsackievirus is a coxsackie B virus.

28. The method of claim 27, wherein the coxsackievirus is CVB3.

29. The method of claim 28, wherein the coxsackievirus is a virulent strain of CVB3.